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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,255	12/20/2000	Christopher Chedgy	10734-003-999	8068

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PENNIE AND EDMONDS
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EXAMINER

KENDALL, CHUCK O

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,255

Applicant(s)

CHEDGEY ET AL.

Examiner

Chuck O Kendall

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the application filed 10/31/00.
2. Claims 1-14 have been examined.

Claim Objections

3. Claims 4-9 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend on another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, & 10-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Brotsky et al. USPN 5,490,246.

Regarding claim 1 Brotsky anticipates a software analysis tool comprising: means for converting software entities and their relationships into a graph having a structure of nodes interconnected by edges(3:20-40), and an editor comprising means for allowing a user to edit the graph(3:5-10), wherein the graph includes a meta node and edge representing a child graph (14:40-45).

Regarding claim 10 Brotsky anticipates a software analysis tool substantially as described with reference to the drawings (Brotsky, 19:5).

Regarding claim 11 see reasoning in claim 1.

Regarding claim 12 the dependency analysis system of claim 11, further comprising:

at least one subclass of the node class, the subclass being specific to a particular category of system(19:45-55, see meta class and class of node).

Regarding claim 13 Brotsky anticipates, dependency analysis system recorded on a computer-readable medium, comprising: an abstraction layer for providing a uniform interface to third-party analysis tools (Brotsky, 19:35-40, see support for raster model and Quick draw);

a graph model data structure for storing dependency information derived through the abstraction layer from third-party tools (Brotsky, 19:35-40, see support for raster model and Quick draw);

a rendering system for providing a plurality of views of the graph model data structure (Brotsky, fig.4 see viewer A and E).

Regarding claim 14 Brotsky, anticipates dependency analysis system comprising:

a data structure stored in computer memory representing a hierarchy of graphs (Brotsky, fig 13); a rendering system for displaying the hierarchy of graphs (figs, 4, & 5);

a user interface responsive to a user action indicating a command to expand a displayed node, the user interface causing the rendering system to

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replace the displayed node with one or more child nodes in response to the user action (fig 14, 1440 see user interface, also 20:50-55, for editor).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, & 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brotsky et al USPN 5,490,246 in view of Guy E. Blelloch Provably Efficient Scheduling for Languages with Fine-Grained Parallelism, Published 1999.

Regarding claim 2 Brotsky discloses all the claimed limitations as applied in claim 1. Brotsky doesn't explicitly disclose bi-directionally folding and unfolding a graph between meta and child levels. However, Blelloch does disclose this feature (Pg,311,5.4.2 see bi-directional and siblings for child levels, also refer to pg. 301, 4.1. for unfolding). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Brotsky and Blelloch, because folding and unfolding operations are a general practice in the graphics field and makes the program more modifiable.

Regarding claims 3 a software analysis tool as claimed in claim 1 or 2, wherein the editor comprises means for automatically generating fresh graph layouts after manipulation (3:20-25).

8. Claims 4-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Brotsky et al USPN 5,490,246 in view of Guy E. Blelloch Provably Efficient

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Scheduling for Languages with Fine-Grained Parallelism, Published 1999 and further in view of Perttunen USPN 6,359,635.

Regarding claim 4 Brotsky as modified discloses all the claimed limitations as disclosed in claim 1. Neither Brotsky nor Blelloch explicitly discloses wherein the conversion means comprises a plurality of back-ends, each being associated with an aspect of a software system. However, Perttunen discloses a backend (21:58-60 for backend see database). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Brotsky as modified by Blelloch with Perttunen because, it would allow the system to be able to retrieve or store information and hence make it more efficient.

Regarding claim 5 a software analysis tool as claimed in claim 4, wherein each back-end comprises means for converting the entities and the relationships of the associated aspect into nodes and edges of the graph (Brotsky, 3:30-45).

Regarding claim 6 a software analysis tool as claimed in claims 4 or 5, wherein the back-ends are associated with managers (Brotsky, 21:10-15, for manager see user and user selectable and viewing).

Regarding claim 7 a software analysis tool as claimed in claim 6, wherein the managers comprise means for routing commands between the editor and the back-ends (Brotsky, 21:58-60 for backend see database and modifying).

Regarding claim 8 a software analysis tool as claimed in claims 6 or 7, wherein each manager is associated with a group of back-ends associated with a group of back-ends (Brotsky, 21:58-60 for backend see database).

Regarding claim 9 a software analysis tool as claimed in claim 8, wherein the back-ends associated with a particular manager share a common interface and set of operations (Brotsky, 21:10-15, see user interface).

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Correspondence Information

9. Any inquires concerning this communication or earlier communications from the examiner should be directed to Chuck O. Kendall who may be reached via telephone at (703) 308-6608. The examiner can normally be reached Monday through Friday between 8:00 A.M. and 5:00 P.M. est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam *can be* reached at (703) 305-4552.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

For facsimile (fax) send to 703-7467239 official and 703-7467240 draft

Chuck O. Kendall

Software Engineer Patent Examiner
United States Department of Commerce

Morgan Anthony Nguyen Be

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